

IMPORTANT TRIAL OF A PATENT SUIT AT BALTIMORE.

I. M. Singer & Co., vs William Walmsley, agent for Ladd, Webster & Co. The plaintiffs in this action are the well-known manufacturers of sewing machines in this city, and the real defendants, Messrs. Ladd, Webster & Co., of Boston, who are also manufacturers of sewing machines. The plaintiffs alleged that the defendants, in the sewing machines made by them, infringed five separate patents granted to I. M. Singer, comprising eight distinct claims. Several different defenses were set up by the defendants to these claims. 1st, That the devices employed by the defendants were not like the improvements described and claimed in the plaintiffs' patents, and therefore could be no infringement. 2d, That the improvements claimed by the plaintiffs were not new, and the patents void for want of novelty. 3d, That one of the plaintiffs' patents was invalid because of an error in the description of the machine, or its mode of operation. 4th, That some of the inventions claimed did not belong to the patentee, but were really invented by another person. 5th, That one of the patents was invalid because the patentee had not disclaimed certain devices which he had become informed were invented by another person before he invented them. The main force of the attack and defense was directed to the above-mentioned first and second points raised by the defendants.

The trial was commenced about the middle of November last, when three days were occupied by the plaintiffs' counsel in opening the case and putting in the formal proof of infringement. The court then adjourned over till the 2d of January, 1860, on account of the illness of a near relative of the leading counsel of the defendants. On the 3d of January the trial was resumed and continued from day to day, consecutively, until the 25th of February, when it terminated in a general verdict for the defendants.

This verdict, if sustained by the decision of the Supreme Court of the United States (to which we are informed, it is to be carried for review) is one of considerable importance to those who manufacture and use sewing machines, as it tends to give to the public the use of certain improvements which have hitherto been generally supposed to be covered by some of the numerous patents owned by I. M. Singer & Co. As the interests at stake are so valuable, it is not likely that either party will relinquish the contest, so long as any means remain for prolonging it.

The plaintiffs, we are informed, directly this trial was terminated, announced their intention of trying other suits in Baltimore, Philadelphia, and New York, involving the same machines of the defendants, with the least possible delay. The present verdict the defendants regard, and justly, as a great triumph.

The plaintiffs claim that the instructions of the court to the jury, in regard to the doctrine of mechanical equivalents, was erroneous, and fatal to their success on this trial. The ruling of the court on this point, we are informed, was, that a patentee can only invoke the aid of mechanical equivalents to sustain his patent, when he has invented an entirely new art or process, and a mechanical device or devices for making such art or process available; but that in all cases where a patent is for an improvement in some known art or process, the doctrine of mechanical equivalents does not apply, and cannot be called in to aid in sustaining the patent. The plaintiffs complain that the rule of construction applied to their patents by the court, in regard to the use of mechanical equivalents, would be utterly destructive to nineteenth-century utility. If the court did intend to decide that the substitution of one well-known mechanical equivalent for another would, in ordinary cases, be sufficient to escape the force of a patent, it is evident that but few patents could be upheld in that tribunal.

We shall watch and duly report the further progress of the great controversy respecting sewing machine improvements, which promises to be as prolific in protracted and expensive litigation as telegraphing machines or india-rubber.

COST AND PERFORMANCES OF LOCOMOTIVES.

The master of machinery—T. Perkins—of the Baltimore and Ohio Railroad, gets up very neat monthly reports of the performance and cost of the locomotives on that road. His report for the month of January—just received—contains some very interesting items. There

are 29 passenger and 170 tonnage engines (including switch engines) on this railroad. With but one exception, they are all coal-burners. The total cost for each mile run by the passenger engines was 9 cents; the cost for running tonnage engines, 18.8 cents. The number of pounds of coal per mile consumed by a passenger engine was 31.3; cost for repairs per mile, 4.9 cents; for coal, 3.4, or 1.5 less than for repairs. The cost for repairs per mile to the freight engines was 12.7 cents; for fuel, 5.3—not the half of the expense incurred for repairs.

This report enables us to compare the difference in expenditure in operating a coal-burning and a wood-burning locomotive. We find that the total cost for operating the coal-burners is 9 cents per mile, that for operating the solitary wood-burner is 10.1—not such a great difference as we would expect to find. The cost for coal is but 3.4 cents per mile, that for wood 7.0 (about double), so that the cost of fuel is in favor of the coal-burners. Why, then, is the total difference of expense in working so small between them? We find that the cost for repairs per mile to the wood-burner is but 2.2, while that for the coal-burners is 4.9. The extra cost for repairs in using coal, we suppose, is owing to the more rapid burning out of the fire-boxes of the boilers.

WEEKLY SUMMARY OF INVENTIONS.

The following inventions are among the most useful improvements patented this week. For the claims to these inventions the reader is referred to the official list on another page:—

FIRE DETECTOR.

This instrument supplies a want that has long been badly felt, especially on board of vessels, where, with the present arrangement, it is impossible to determine the temperature of the cargo in the hold. Many vessels have been destroyed by spontaneous combustion of the cargo, which might have been saved by this instrument, which indicates the temperature of the cargo in any part of the vessel by means of a scale and pointer on the deck or in any convenient part of the vessel. If the cargo begins to heat, it is ascertained at once, and measures can be taken to prevent danger before it is too late. The inventor of this truly valuable instrument is W. D. Grimshaw, of Newark, N. J., who has secured a patent for the same both in the United States and in England.

AIR TRAP.

Thomas Sault, of Seymour, Conn., has invented a new air trap for steam apparatus, which consists in a valve of hard vulcanized india-rubber, so applied within a box of metal or other material attached to a radiator for heating a building or apartment, or to any apparatus heated by steam, as to provide by the agency of its vastly greater capability of contraction and expansion with changes of temperature as compared with the metal or material of which the box is made, for the escape of any air that may have collected within the steam space before it has been filled with steam, or when the steam has condensed therein, but to prevent the escape of steam therefrom.

POLICEMAN'S CLUB.

The object of this invention is to prevent the club being wrenched from the hand of the policeman while in the discharge of his duty, a contingency which frequently occurs, and subjects the officer to punishment from his own weapon. The invention consists in providing the club (which is constructed similar to those ordinarily used) with a sheath or cover secured by a spring catch in proper position on the club, and so arranged that when the club is grasped by an opponent, the officer, by actuating the spring catch, releases the sheath, which is the only part that can be seized or grasped by the opponent, and consequently liberates the club; the sheath being left in the hands of the opponent, and the naked club in the hands of the policeman or officer. John L. Rowe, of this city, is the inventor.

PEN AND PENCIL CASE.

This invention relates to an improvement on a pen and pencil case, for which Letters Patent (bearing date July 12, 1859), were granted to the inventor, John Richardson, of this city. This patented case has two spirally slotted sleeves fitted on a common tube which contains the pencil tube, the sleeves abutting at their inner ends against a collar on the tube which encompasses the sleeves, and all arranged in such a manner, in connection with an outer shell, and in such a relation with the pen and pencil slides, that either of the latter named

parts may be moved independently of the other, so that on withdrawing one within the case, by continuing the same movement of the outer shell, the other will be thrown out. This arrangement of parts operated well, and answered an excellent purpose; but, in common with other inventions of the same kind, a long case was formed, even when contracted to its smallest dimensions. The object of this invention is to overcome this difficulty and obtain an extremely portable pen and pencil case, and, at the same time, retain all the advantages possessed by the patented case above alluded to.

FOREIGN NEWS AND MARKETS.

They do things up in grand style in London. The tunnel under the river Thames, and the *Great Eastern*, are world's wonders, and no where out of London could such projects be carried out at the present day. But something more magnificent still than the Thames tunnel is about to be achieved in London, and the work has already commenced; this is the tunneling of the city itself for a grand "trunk" underground railway, intersected by several lines, to get rid of the crowded thoroughfares. The expense will be enormous, but there is plenty of money in the British metropolis to do the work and to do it well.

At a late meeting of the English Geographical Society, a number of distinguished literary and scientific men being in attendance, a paper was read from Mr. William Wheelwright, an American (who has been for a long time engaged in building railroads in South America), in which he expresses the opinion that the Andes might be crossed by a railroad, thus making a line from the Pacific to Rosario, *via* Cordova, a distance of 1,100 miles. The route has been carefully explored, the elevations fixed by barometrical measurement, and the Pass of San Francisco ascertained never to be blocked by snow, travelers crossing it at all seasons. The author is of opinion that the construction of such a railroad, though difficult, is practicable, and the advantages that would accrue by opening up the South American States to commerce would be large; the Rio de la Plata being navigable at the foot of Rosario for vessels drawing twelve feet of water. It appears that the South American States are so fully alive to the advantages they will derive from the execution of this project that the Argentine republic has offered a free grant of land, five miles in breadth, on either (each?) side of the railroad.

In Scotland a great strike has just taken place among the iron-smelting operatives in the vicinity of Glasgow. No less than 100 blast furnaces have been put out in consequence, and the result is, that the iron-masters in Staffordshire (England) are enjoying the benefits of increased orders. In all likelihood, however, the strike will result in a rise of Scotch pig iron, which is of such a peculiar character that a rival to it has not yet been found anywhere for certain kinds of castings requiring a very smooth surface.

In Sheffield, England, solid cast steel spades and shovels are now manufactured. They take a bar of solid cast steel, into which, by powerful machinery specially erected for the purpose, they punch a hole just large enough for the foot of the handle to enter; afterwards they forge and hammer it down to the required thickness and finish. Thus the tool, being of cast steel, is uniformly strong throughout.

A mechanic of Paris has introduced a neat pocket machine for the manufacture of paper cigarettes, by means of which a smoker may make his own segars of such tobacco as he chooses. It consists of a small wooden mold, within which is placed a thin paper tube, which is quickly rammed full of tobacco by means of a little funnel and rammer inserted at the large end. The cigar is then pushed out complete, and is ready for smoking. The papers, which are very thin and light, and are colored to resemble common cigars, accompany the apparatus.

A correspondent of an English paper states that by the use of oiled wads his fowling-piece never becomes foul inside. He says:—"I use the common wadding (about 4-16ths thick), but I oil so much that when ready I can, by squeezing hard, get a little oil to show itself, and with this I load, carrying the greasy wadding in a tin made to fit the vest pocket, about 4 inches long, 1½ wide, 2½ deep in front, with a curvature to fit the body. This case will hold about 50 wads. Of course I use the oil brush about the nipples and locks after shooting."